

REMARKS

Reconsideration of the above-identified patent application, as amended, is respectfully requested.

Applicant and his representative is grateful to the Examiner for discussing the application in a telephone interview. While no agreement was reached during the interview, applicant explained the operation of the barrier system and the Examiner suggested the possibility of amending the claims to more definitively describe the geometry of the impact panels and the associated crushable members.

The claims remaining in the application are the independent product claim 1, the dependent product claims 4, 20 and 21 and the independent method claim 22. The claims have been rejected in view of the U.S. Patents issued to Moore and Fujii.

Referring to the description of the impact panel on page 5, line 22 of the specification as related to Fig. 1a, the impact panel 100 has a first plate 130 with a wall adjacent surface 135 joined by means of a second plate 140 to a third plate 150 that is substantially parallel (page 6, line1) to the wall adjacent surface 135. In other words, the inner plate 130 and the outer plate 150 are parallel and extend along the barrier wall.

To distinguish over the cited reference to Moore, applicant has therefore place into the independent claim 1 the previously described geometry of the impact panel. Referring to Fig. 6, the barrier system includes a lead panel 300 and a distal end panel 200 between which are located two impact panels 100. The first impact panel 100 is therefore described in claim 1 as having a first flat proximal portion, corresponding to 130 in Fig. 1c. The first flat proximal portion 130 extends as previously described adjacent the barrier. The same impact panel has a first angular portion 140 that extends

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angularly outward from the barrier and is angularly connected to the first flat proximal portion 130 and angularly connected to the first flat distal portion 150. Similarly, the second impact panel 100 shown in Fig. 6 has the same geometry. Thus, the second impact panel in claim 1 has been amended accordingly. Further, claim 1 has been amended to define the second flat distal portion 150 of the second impact panel as being positioned adjacent and inwardly of the first distal end of the first impact panel with the first distal end overlapping the second flat distal portion of the second impact panel and being unconnected thereto while being independently slidably movable relative to the second flat distal portion. Further, claim 1 requires the first flat distal portion of the first impact panel and the second flat distal portion of the second impact panel to be parallel to each other.

As the vehicle impacts the first impact panel, the vehicle will be directed along an area extending across the first flat distal portion 150 of the first impact panel and the second flat distal portion 150 of the second impact panel. Notably, each impact panel has a flat distal portion and a flat proximal portion unlike the Moore panels which simply are pivoted about a hinge point at their proximal ends as specifically shown in Fig. 6 of the Moore patent. Thus, when the vehicle impacts the Moore panel as shown in Fig. 6, the panel does not elongate like applicant's panel due to the fact that applicant's angular portion 140 is angularly joined at its opposite ends to two flat portions 130 and 150 allowing portion 140 to move in the direction of the barrier wall upon impact causing the distal portion 150 to extend further and slidably against the inwardly located but adjacent proximal portion of the adjacent impact panel. In other words, applicant's impact panels telescope as a direct result of the angular connection of the angular portion 140 being

angularly connected to two flat portions 130 and 150. Such type of action would not occur with the Moore impact panel. For this reason, it is believed that applicant's invention is significantly different and advantageous as compared to the device shown in the Moore patent.

The indefinite clause in claim 4 rejected under 35 USC 112 has been deleted.

Regarding applicant's crushable members located between the barrier wall and the flat distal portion of each impact panel, applicant refers to page 11, line 16 of the specification wherein the crush panels are dimensionally adapted to fit within the voids created between adjacent impact panels. Since the outer or distal portion of each impact panel is parallel to not only the barrier wall but also the proximal portion of each impact panel as previously described, the crushable members include the same type of geometry. Namely, the crushable members have flat outer surfaces and flat inner surfaces adjacent respectively the proximal portions and the distal portions of the impact panels. Claim 4 has therefore been amended to define the first crushable member as being dimensionally adapted to fit between the first flat distal portion, the second flat proximal portion, and between the first angular portion of the first impact panel and the second angular portion of the second impact panel enclosing the crushable member and separating it from the barrier wall. Similarly, the second crushable member is dimensionally adapted to fit between adjacent impact panels. Such is distinguishable from Moore (6,554,530) wherein the crushable member contacts the concrete barrier wall. As shown in Fig. 6, the crushable members are rectangular in configuration.

Upon impact, since the first flat distal portion of the first impact panel is adjacent the first crushable member and outwardly adjacent the second flat distal portion of the


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second impact panel, the first flat distal portion directly contacts as defined in the claim and deflects the first flat distal portion against the first crushable member while the second flat distal portion is deflected against the second crushable member. Since the outer portions of each impact panel in Moore are spaced apart from the outer portions of adjacent impact panels, the impact force is directed immediately into the crushable member that is directly behind the impact panel that is directly impacted by the vehicle without the immediate sliding motion of applicant's distal portion of an upstream impact panel immediately contacting the distal portion of a downstream adjacent impact panel resulting in the crushing of both crushable members and a resulting downstream force vector applied as the vehicle slides along the parallel distal portions of adjacent impact panels. It is therefore believed claim 4 is allowable. Claim 20 further defines the impact panels in the terms of plates connected together in a manner similar to the language used in the parent claims and is believed allowable for the same reasons given for the allowance of the parent claims.

Claim 21 defines the particular fastening system that is not suggested by any of the references. The method claim 22 has been amended to emphasize directing the vehicle along an area extending across the first flat portion and the second flat portion of the first and second impact panel which is parallel to the barrier as distinguished from the uneven bumpy surface depicted in the impacted Moore panels.

For the above reasons, applicant is of the opinion that the subject claims should be allowed. In the event the Examiner believes any further changes are required, the Examiner is urged to contact applicant's representative by telephone.

Respectfully submitted,

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